Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	13096	(cAMP assay)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:55
L2	3868	(cGMP assay)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:55
L3	2927	L1 AND L2	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:55
L4	1960	Fluorescent AND L3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:55
L5	588	cyclase AND L4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:56
L6	152795	(G(W)protein)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:56
L7	525	L5 AND L6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:57
L8	10916	(Cyclase activity)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 15:57

L9	525	L7 AND L8	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 16:04
L10	1557	radioactive AND L3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 16:05
L11	436	L8 AND L10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 16:45
L12	4	(US "6762026")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/03/30 16:46

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	(US "5443984")	USPAT	AND	ON	2005/03/30 17:42
L2	34	(US "5443986")	USPAT	AND	ON	2005/03/30 17:56
L3	27	(BODIPY FL GTP)	USPAT	AND	ON	2005/03/30 17:51
L4	0	L2 AND L3	USPAT	AND	ON	2005/03/30 17:51
L5	575	BODIPY	USPAT	AND	ON	2005/03/30 17:51
L6	3	L2 AND L5	USPAT	AND	ON	2005/03/30 17:51
L7	128710	(G protein)	USPAT	AND	ON	2005/03/30 17:56
L8	0	L2 AND L&	USPAT	AND	ON	2005/03/30 17:57
L9	35	(US "5316906")	USPAT	AND	ON	2005/03/30 18:10
L10	29	L2 AND L7	USPAT	AND	ON	2005/03/30 17:58
L11	1	Cyclase AND L9	USPAT	AND	ON	2005/03/30 18:12
L12	0	Cyclase AND L2	USPAT	AND	ON	2005/03/30 18:11
L13	7	hydrolase AND L9	USPAT	AND	ON	2005/03/30 18:13
L14	11	hydrolase AND L2	USPAT	AND	ON	2005/03/30 18:13

and cyclic nucleotide-dependent protein kinases) permits monitoring of several **assay** components simultaneously.

L19 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI **Adenylate cyclase** and **cAMP**
SO Signal Transduction (1992), 75-103. Editor(s): Milligan, Graeme. Publisher: IRL, Oxford, UK.
CODEN: 59ZZAM
AB A review, with 26 refs., on: the binding protein **assay** for **cAMP**; determination of **adenylate cyclase** activity; **cAMP** and **adenylate cyclase** by metabolic labeling of ATP; and **guanylate cyclase** and **cGMP**.

L19 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Role of cyclic nucleotides in rapid platelet adhesion to collagen
SO Blood (1994), 83(9), 2508-15
CODEN: BLOOAW; ISSN: 0006-4971
AB Adhesion of human platelets to type I collagen under arterial flow conditions is extremely fast, being mediated primarily by the α2β1 integrin (glycoprotein Ia/IIa). The authors have investigated the involvement of cyclic nucleotides in platelet adhesion to soluble native collagen immobilized on Sepharose beads using a new microadhesion **assay** under arterial flow conditions. To prevent platelet stimulation by thromboxanes and ADP, expts. were performed with aspirin-treated platelets in the presence of ADP-removing enzyme systems such as creatine phosphate/creatine phosphokinase or apyrase. Rapid reciprocal changes in platelet adenosine 3'5'-cyclic monophosphate (**cAMP**) and guanosine 3'5'-cyclic monophosphate (**cGMP**) occurred during adhesion. **CAMP** levels in adherent platelets were 2.4-fold lower than in effluent platelets or in static controls, whereas **cGMP** levels were increased 2.4-fold. These results suggest that contact between platelets and collagen stimulates **guanylate cyclase** and inhibits **adenylate cyclase**. This occurs in the absence of the platelet release reaction. The authors also studied short-term effects of agents that regulate cyclic nucleotide synthesis, prostaglandin E1 (PGE1) and sodium nitroprusside (SNP). After only 3.8 s at 10 to 30 dyne/cm2, PGE1 (10 μmol/L) increased **cAMP** 16.4-fold, whereas SNP (50 μmol/L) increased **cGMP** ninefold and caused a 3.2-fold increase in **cAMP**. Both PGE1 and SNP rapidly (<5 s) inhibited platelet adhesion in a dose-dependent manner that was correlated with the increase in cyclic nucleotides. The authors' data suggest that **cAMP** and **cGMP** play a regulatory role in the initial phases of platelet adhesion to collagen mediated by the α2β1 integrin receptor.

L19 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Non-chemotactic Dictyostelium discoideum mutants with altered **cGMP** signal transduction
SO Journal of Cell Biology (1993), 123(6, Pt. 1), 1453-62
CODEN: JCLBA3; ISSN: 0021-9525
AB Folic acid and **cAMP**, which bind to different surface receptors, are chemoattractants in D. discoideum. The signal is transduced from the receptors via different G proteins into a common pathway which includes **guanylyl cyclase** and actomyosin. To investigate this common pathway, 10 mutants that do not react chemotactically to both **cAMP** and folic acid were isolated with a simple new chemotactic **assay**. Genetic anal. shows that 1 of these mutants (KI-10) was dominant; the other 9 mutants were recessive and comprise 9 complementation groups. In wild-type cells, the chemoattractants activate **adenylyl cyclase**, phospholipase C, and **guanylyl cyclase** in a transient manner. In mutant cells, the formation of **cAMP** and myoinositol trisphosphate were generally normal, whereas the **cGMP** response was altered in most of the 10 mutants. Particularly, mutant KI-8 has strongly reduced basal **guanylyl cyclase** activity; the enzyme is present in mutant KI-10, but cannot be activated by **cAMP** or folic acid. The **cGMP** response of 5 other mutants is altered in either magnitude, dose

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=> s L3 AND (enzyme activity assay)
        733333 ENZYME
        423652 ENZYMES
        925687 ENZYME
                  (ENZYME OR ENZYMES)
       2013324 ACTIVITY
        394643 ACTIVITIES
       2176350 ACTIVITY
                  (ACTIVITY OR ACTIVITIES)
        323166 ASSAY
        139761 ASSAYS
        423682 ASSAY
                  (ASSAY OR ASSAYS)
           479 ENZYME ACTIVITY ASSAY
                  (ENZYME(W)ACTIVITY(W)ASSAY)
L16           0 L3 AND (ENZYME ACTIVITY ASSAY)

=> s L3 and assay
        323166 ASSAY
        139761 ASSAYS
        423682 ASSAY
                  (ASSAY OR ASSAYS)
L17          43 L3 AND ASSAY

=> s cAMP and cGMP
         81111 CAMP
          1096 CAMPS
         81483 CAMP
                  (CAMP OR CAMPS)
         20143 CGMP
           191 CGMPS
         20168 CGMP
                  (CGMP OR CGMPS)
L18        8084 CAMP AND CGMP

=> L17 and L18
L17 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s L17 and L18
L19          17 L17 AND L18

=> d 1-5 ti, so, abs L19

L19  ANSWER 1 OF 17  CAPLUS  COPYRIGHT 2005 ACS on STN
TI   Guinea-pig lung adenylyl and guanylyl cyclase and PDE
     activities associated with airway hyper- and hypo-reactivity following LPS
     inhalation
SO   Life Sciences (2005), 76(9), 997-1011
     CODEN: LIFSAK; ISSN: 0024-3205
AB   The relationships between changes in in vivo airway reactivity and levels
     cAMP and cGMP were determined in guinea-pig lungs after
     exposure to inhaled lipopolysaccharide (LPS).  After LPS (30 μg.ml-1, 1
     h), guinea-pigs displayed in vivo airway hyperreactivity (AHR) at 1 h and
     hyporeactivity (AHOR) at 48 h, to inhaled (20 s) histamine (1 or 3 mM,
     resp.).  Isoprenaline-stimulated cAMP or SNAP-stimulated
     cGMP were determined in the lungs isolated from guinea-pigs exposed to
     LPS inhalation to determine whether there was a relation between AHR or AHOR
     and adenylyl/guanylyl cyclase and phosphodiesterase
     (PDE) activities.  Assays were performed in the absence and
     presence of the nonselective PDE inhibitor, 3-isobutyl-1-methylxanthine
     (IBMX).  Levels of cAMP and cGMP in its presence
     indicated adenylyl and guanylyl cyclase activities,
     resp.  The difference between cAMP and cGMP levels, in
     the absence and presence of IBMX, reflected relevant PDE activity.  In
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vivo AHR was associated with increased PDE activity towards **cAMP** and **cGMP** (67 and 278%, resp.) and also increased adenylyl (47%) and guanylyl (210%) cyclase activities. In vivo AHOR at 48 h after LPS inhalation was also associated with raised cyclase activity, whereas relevant PDE activity declined by 79 and 68%, compared with 48 h after vehicle. Although net stimulated **cGMP** levels increased during AHR and AHOR and net stimulated **cAMP** increased during AHOR, the authors' index of PDE activity increased during AHR and decreased during AHOR. These results therefore support the rationale for the use of PDE-inhibitors in the treatment of respiratory diseases associated with AHR.

L19 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Endothelium-dependent and -independent vasorelaxation by a theophylline derivative MCPT: Roles of cyclic nucleotides, potassium channel opening and phosphodiesterase inhibition
SO Life Sciences (2005), 76(8), 931-944
CODEN: LIFSAK; ISSN: 0024-3205
AB The vasorelaxation activities of MCPT, a newly synthesized xanthine derivative, were investigated in this study. In phenylephrine (PE)-precontracted rat aortic rings with intact endothelium, MCPT caused a concentration-dependent relaxation, which was inhibited by endothelium removed. This relaxation was also reduced by the presence of nitric oxide synthase inhibitor Lω-nitro-L-arginine methylester (L-NAME, 100 μM), soluble **guanylyl cyclase** (sGC) inhibitors methylene blue (10 μM), 1 H-[1,2,4] oxidazolol [4,3-a] quinoxalin-1-one (ODQ, 1 μM), **adenylyl cyclase** (AC) blocker SQ 22536 (100 μM), ATP-sensitive K+ channel blocker (KATP) glibenclamide (1 μM), a Ca2+ activated K+ channels blocker tetraethylammonium (TEA, 10 mM) and a voltage-dependent potassium channels blocker 4-aminopyridine (4-AP, 100 μM). The vasorelaxant effects of MCPT together with IBMX (0.5 μM) had an additive action. In PE-preconstricted endothelium-denuded aortic rings, the vasorelaxant effects of MCPT were attenuated by pretreatments with glibenclamide (1 μM), SQ 22536 (100 μM) or ODQ (1 μM), resp. MCPT enhanced **cAMP**-dependent vasodilator isoprenaline- and NO donor/**cGMP**-dependent vasodilator sodium nitroprusside-induced relaxation activities in endothelium-denuded aortic rings. In A-10 cell and washed human platelets, MCPT induced a concentration-dependent increase in intracellular **cGMP** and **cAMP** levels. In phosphodiesterase **assay**, MCPT displayed inhibition effects on PDE 3, PDE 4 and PDE 5. The inhibition % were 52±3.9, 32±2.6 and 8±1.1 resp. The Western blot anal. on HUVEC indicated that MCPT increased the expression of eNOS. It is concluded that the vasorelaxation by MCPT may be mediated by the inhibition of phosphodiesterase, stimulation of NO/sGC/ **cGMP** and AC/**cAMP** pathways, and the opening of K+ channels.

L19 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Comparative analysis between cyclic GMP and cyclic AMP signaling in human sperm
SO Molecular Human Reproduction (2004), 10(7), 543-552
CODEN: MHREFD; ISSN: 1360-9947
AB The principal involvement of cyclic nucleotides in regulating sperm functions is well established, but the factors controlling their generation and actions have not yet been entirely resolved. In particular, specific roles for cyclic (c)GMP in mammalian sperm are poorly understood. In this study, we have characterized comparatively the **cAMP** and **cGMP** signaling systems in ejaculated human sperm. Mean concns. of **cGMP** (0.1 μmol/L) were found to be 100-fold lower than those of **cAMP** in non-stimulated cells, and **adenylyl cyclase** (AC) activities predominate by far **guanylyl cyclase** (GC) activities in both particulate and soluble protein fractions. By different exptl. approaches (photoaffinity labeling, cyclase **assays**, immunoblotting), we provide evidence for the presence (**guanylyl cyclase**-A, soluble **guanylyl cyclase**, regulatory and catalytic subunits of **cAMP**-dependent protein kinase) or absence (**guanylyl cyclase**-B, natriuretic peptide clearance receptor, neuronal nitric oxide synthase, **cGMP**-dependent protein kinase I) of different

factors involved in either **cAMP** or **cGMP** pathways. Functional studies showed that **cGMP**, at high concns., can enhance sperm protein tyrosine phosphorylation but not serine phosphorylation of glycogen synthase kinase. This study reveals that human sperm are characterized by an exceptional predominance of **cAMP** signaling and indicates potential roles for **cGMP**.

L19 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Phosphodiesterase 10A cell-based **assay** and protein DNA sequences for drug screening
SO Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
AB The invention features a method of screening for an agent that inhibits intracellular phosphodiesterase 10A activity, comprising administering an agent to striatal medium spiny neurons and submaximally activating **adenylate cyclase** and **guanylate cyclase**, measuring **cAMP** and **cGMP** generation in the cells, and calculating the **cAMP** EC200 and the **cGMP** EC200, wherein the agent is identified as a PDE10A inhibitor if the ratio of **cAMP** EC200/ **cGMP** EC200 is comparable to the ratio produced by administration of papaverine under the same **assay** conditions. Also featured are rat PDE10A polynucleotide and polypeptide sequences. Phosphodiesterase (PDE) inhibitors of invention include papaverine, rolipram, zaprinast and IBMX.

L19 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI cDNAs encoding human olfactory cyclic nucleotide gated (CNG) channel subunits for use in enhancing smell receptors
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
AB The present invention relates to isolated nucleic acid sequences that encode human olfactory cyclic nucleotide gated (CNG) channel subunits, and the corresponding polypeptides. The invention further relates to the use of human CNG channels to profile, screen for, and identify compds. that modulate the human olfactory CNG channel. More specifically, the invention relates to the expression of the human olfactory CNG channel in cells, preferably mammalian cells, and the use of these cells in high throughput cell-based **assays** to identify compds. that enhance or block human olfactory CNG function. Compds. that activate the olfactory CNG channel will enhance smell and can be used to make foods more palatable for individuals with attenuated olfactory function. Conversely, compds. that inhibit the olfactory CNG channel will inhibit smell and can be use to block malodors. Addnl., the invention relates to the use of cell-based olfactory CNG channel **assays** to identify modulators of G-protein coupled receptor (GPCRs) and other proteins that regulate cyclic nucleotide levels. Claimed sequence ID#4 is missing.

=> d 6-17 ti, so,abs L19

L19 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Cell-signaling **assays** using cyclic nucleotides coupled to luminophores
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
AB The invention concerns **assays** for detecting the presence and activity of cell-signaling components. These **assays** include luminescence polarization **assays** for detecting cell-signaling nucleotides and modulators of receptors and enzymes related to the generation and activity of such nucleotides. The method of detecting activation of a receptor on a cell comprises the contacting of a luminescently labeled nucleotide with a specific binding partner, wherein the extent of binding between the nucleotide and the specific binding partner may be correlated to receptor activation, and detecting luminescence polarization, wherein an increase in the level of polarization indicates activation of the receptor. The step of detecting luminescence polarization comprises evaluating a function selected from the group consisting of polarization and anisotropy. The specific binding

partner is selected from the group consisting of antibodies and GTP-binding proteins. The nucleotide is selected from the group consisting of **cAMP**, **cGMP**, and nonhydrolyzable GTP. The method further comprises the step of incubating whole cells or a cell lysates with a compound to determine the affect of the compound on activation of the receptor.

L19 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Involvement of the cyclic GMP pathway in the superoxide-induced IP3 formation in vascular smooth muscle cells
SO Journal of Hypertension (2000), 18(8), 1057-1064
CODEN: JOHYD3; ISSN: 0263-6352
AB To investigate whether **cGMP** or **cAMP** signal pathway is indirectly involved in the effect of superoxide on the IP3 formation in vascular smooth muscle cells (SMC) from rat mesenteric arteries. Cultured smooth muscle cells from rat mesenteric arteries were prelabeled with myo-(2-3H) inositol for evaluation of IP3 formation. Quant. **cAMP** and **cGMP** levels were determined using **cAMP** [3H] or **cGMP** [125I] **assay** systems. In the present study, it was found that superoxide significantly inhibited the basal level of **cGMP** and also suppressed the sodium nitroprusside (SNP)-induced **cGMP** formation in SMCs from rat mesenteric arteries. The inhibitory effect of superoxide on basal level of **cGMP** was similar in the absence or presence of ODQ (a **guanylyl cyclase** inhibitor). Moreover, the superoxide-induced increase in IP3 formation was significantly inhibited by SNP or s-nitroso-n-acetylpenicillamine but was significantly potentiated by ODQ or KT5823 (a **cGMP**-dependent protein kinase inhibitor). Superoxide had no effect on the basal or on the forskolin-induced **cAMP** production and the inhibition of **adenylyl cyclase** or **cAMP** -dependent protein kinase did not affect the superoxide-enhanced IP3 formation. The decreased cross-inhibition of IP3 pathway by **cGMP** may contribute to the superoxide-enhanced IP3 formation in SMCs from mesenteric arteries. The cross-talk between **cGMP** and IP3 pathways provides a novel mechanism for the signalling role of superoxide in vascular SMCs.

L19 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Functional identification of phosphodiesterase activity in human trabecular meshwork cells
SO Journal of Ocular Pharmacology and Therapeutics (2000), 16(4), 317-322
CODEN: JOPTFU; ISSN: 1080-7683
AB The phosphodiesterases (PDE) activity in human trabecular meshwork cells (HTM-3) was investigated in this study in order to better understand the signal transduction pathways in the conventional outflow tract of the eye. Agonists (isoproterenol or nitroprusside) were used to stimulate **adenylyl cyclase** and **guanylyl cyclase** , resp., in the absence and presence of nonselective IBMX or PDE5 specific inhibitors E4021. The subcellular distribution of **cAMP** and **cGMP** PDEs was determined directly by PDE enzyme **assays** using HTM-3 cells. Levels of cyclic nucleotides were measured in the same cells by RIA. Isoproterenol alone elevated **cAMP** levels, and this response was enhanced by IBMX. Nitroprusside alone caused no increase in basal **cGMP** levels but, in the presence of E4021, nitroprusside produced significant, dose-related elevation of **cGMP** levels. Subcellular distribution expts. indicated that the greatest activity for PDEs resided in the supernatant fraction. In conclusion, HTM-3 cells contain PDEs that degrade both cyclic nucleotides. The PDE activities reside predominantly in the supernatant, but the PDE activity for degrading **cGMP** is more pronounced. Moreover, results with E4021 suggest that PDE5 activity could play a critical role in modulating **cGMP**-related activity in the trabecular meshwork.

L19 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI A bacterial multi-hybrid system and applications
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
AB A signal amplification system comprises a bacterial multi-hybrid system,

and more preferably a two-hybrid system, of at least two chimeric polypeptides containing a first chimeric polypeptide corresponding to a first fragment of an enzyme and a second chimeric polypeptide corresponding to a second fragment of an enzyme or a modulating substance capable of activating said enzyme. The first fragment is fused to a mol. of interest and the second fragment or the modulating substance is fused to a target ligand. The activity of the enzyme is restored by the in vivo interaction between the mol. of interest and the target ligand. Signal amplification is generated and, for example, triggers transcriptional activation. The signal amplification system is useful in a method of selecting a mol. of interest, which is capable of binding to target ligand, wherein the interaction between the mol. of interest and the target ligand is detected with the signal amplification system as a kit therefor. A method of screening for a substance capable of stimulating or inhibiting the interaction between a target ligand and a mol. of interest is also provided. To analyze interactions between various sub-domains of dimeric tyrosyl-tRNA synthetase (TyrRS) from Bacillus stearothermophilus, different fragments of the TyrRS polypeptide (generated by PCR) were fused in frame with either the T25 or the T18 fragment of **adenylate cyclase** (cya) of Bordetella pertussis, and the resulting chimeric proteins were tested for functional complementation in DPH1 cells (a cya-deficient derivative of DH1 cells). Three different types of interactions between the TyrRS monomers or between the TyrRS subdomains were revealed.

L19 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Identification of a **Guanylyl Cyclase**-Activating Protein-Binding Site within the Catalytic Domain of Retinal **Guanylyl Cyclase** 1
SO Biochemistry (1999), 38(5), 1387-1393
CODEN: BICHAW; ISSN: 0006-2960
AB Regulation of **cAMP** and **cGMP** production is a fundamental step in a broad range of signal transduction systems, including phototransduction. To identify regions within photoreceptor **guanylyl cyclase** 1 (GC1) that interact with GC-activating proteins (GCAPs), we synthesized the intracellular fragment of GC1, residues 491-1110, as a set of 15 amino acid long, partially overlapping peptides on the surface of individual pins arranged in a microtiter plate format. This pin **assay** identified 8 peptides derived from different regions of the GC1 intracellular domain that bind GCAPs. Peptide variants containing these sequences were synthesized as free peptides and tested for their ability to inhibit GC1 stimulation by GCAPs. A free peptide, 968GTFRMRHMPEVPVRIRIG, from the catalytic domain of GC1 was the strongest inhibitor of GCAP1/GCAP2-mediated activation. In native GC1, this polypeptide fragment is likely to form a loop between α-helix 3 and β-strand 4. When this region in GC1 was replaced by the corresponding sequence of GCAP-insensitive GC type A, GCAPs did not stimulate the GC1 mutant. The corresponding loops in related **adenylyl cyclase** (AC) are involved in the activating and inhibiting interactions with Gsα and Giα, resp. Thus, despite interacting with different activating proteins, both AC and GC activity may be modulated through their resp. regions within catalytic domains.

L19 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Qualitative and quantitative MS analysis of cyclic nucleotides and related enzymes
SO Biochemical Society Transactions (1996), 24(3), 938-943
CODEN: BCSTB5; ISSN: 0300-5127
AB A review with 38 refs. There are several reasons for application of mass spectrometry (MS) to cyclic nucleotide studies. Although the conventional **assays** for cyclic nucleotides yield excellent quant. data from samples of interfering compds., when samples of novel origin are studied it is first essential to provide unequivocal evidence of the identity of the putative cyclic nucleotide before its quantification. The standard protocols for cyclic nucleotide anal. apply only for **cAMP** and **cGMP**, but other cyclic nucleotides exist. Both synthetic and naturally occurring cyclic nucleotide analogs and derivs. can be structurally elucidated. Application to cyclic nucleotide-related enzymes (such as the nucleotidyl cyclases, cyclic nucleotide phosphodiesterases,